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SB SAT @ AMSAT $ANS-341.01
ISS CREWS NAMED

HR AMSAT NEWS SERVICE BULLETIN 341.01 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 07, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-341.01

NASA recently named the first team members to live and work aboard the International Space Station, and four crew members already hold ham tickets. In addition, several of the crew members are studying for their licenses.

The first crew will consist of American astronaut William M. Shepherd, as the expedition commander. Shepherd is currently studying for his ticket. He'll be accompanied by Russian cosmonauts Yuri Gidzenko and Sergei Krikalev, U5MIR. The crew is training for an early 1999 launch and a planned five-month mission on the ISS.

The second crew, headed by Russian cosmonaut Yuri Usachev, R3MIR, will include US astronauts Susan Helms, KC7NHZ, and James S. Voss, who's indicated an interest in getting his ham ticket.

No licensed hams are among the third crew, which will be headed by astronaut Kenneth Bowersox and will include Russian crewmates Vladimir Dezhurov and Mikahil Turin. Bowersox also has said he'd like to get his ham license.

Russian cosmonaut Yuri Onufrienko will head the fourth crew. US astronauts Carl Walz, KC5TIE, and Daniel Bursch will accompany him.

AMSAT-NA's VP of Manned Space, Frank Bauer, KA3HDO, reports that the international team developing the ISS ham radio station is now working hard to incorporate a transportable ham station for ISS, and deliver this equipment to the Johnson Space Center in Houston, Texas for flight certification in June, 1998. Initially, ISS crews will inhabit the service module, which will include a ham radio antenna, with ham gear scheduled to be delivered aboard the STS-96 shuttle flight. Microsat/repeater payloads are tentatively scheduled to arrive in early 2002, expanding ham radio capability aboard the station.

Stay tuned to ANS for more information on ham radio's planned presence on ISS as it develops.

[ANS thanks the ARRL, NASA and Frank Bauer, KA3HDO, for this information]

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SB SAT @ AMSAT $ANS-341.02
PHASE 3D UPDATE

HR AMSAT NEWS SERVICE BULLETIN 341.02 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 07, 1997

TO ALL RADIO AMATEURS BT
BID: $ANS-341.02

Phase 3D Project Leader Karl Meinzer, DJ4ZC, recently visited the Phase 3D Integration Lab in Orlando for a top-to-bottom review of Phase 3D's status. The Phase 3D satellite was to have been aboard the Ariane 502 flight October 30, but ESA's revision of launch environments, and the consequent structural modifications to the satellite's spaceframe made it impossible for Phase 3D to meet the 502 flight schedule.

According to AMSAT-NA President Bill Tynan, W3XO, the structural work is now essentially complete and the crew at the Orlando Lab are beginning to re-install electronic modules and other equipment which had to be removed so that the structural work could proceed. Following this tests will be conducted to confirm satisfactory interoperability of all of the Satellite's various sub-systems and then environmental testing will take place.

Tynan further stated that he doesn't expect any new information concerning a launch date and vehicle for Phase 3D until well after European space authorities determine the root cause of the early engine shutdown that took place on the recent Ariane 502 flight.

Keith Baker, KB1SF, AMSAT-NA's Executive Vice President noted that according to the original schedule, the next Ariane 5 vehicle (503) is due to lift off in May, 1998, for the final qualification flight of the Ariane 5 program. The first Ariane 5 commercial launch (L504) is currently planned for the second half of 1998.

[ANS thanks Karl Meinzer, DJ4ZC, Keith Baker, KB1SF, and Bill Tynan, W3XO, for this information]

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SB SAT @ AMSAT $ANS-341.03
DOVE QSL UPDATE

HR AMSAT NEWS SERVICE BULLETIN 341.03 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 07, 1997
TO ALL RADIO AMATEURS BT
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Jim White, WD0E, reports strong requests for Dove (DO-17) QSL cards. To receive a DOVE QSL, receiving stations need to send a request indicating the date, time and frequency the satellite was received. Jim reports that it is not necessary to send a breakdown of the satellite telemetry or a printout of received data. Include a self addressed stamped envelope (SASE) or an addressed envelope with an International Reply Coupon (IRC) with your request. Reception reports should be sent to;

Dianne White N0IZO
45777 Rampart Road
Parker, Colorado 80138-4316
USA

Jim also notes that for those stations that would like to decode the DO-17 data, several programs are available to decode the telemetry from DOVE. Some shareware decoders can be found on Compuserve and America On Line. Also the decoder TLMDCII, which includes an extensive .DOC file of information about Microsat telemetry (including DOVE), is available from AMSAT-NA.

[ANS thanks Jim White, WD0E, for this update]

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SB SAT @ AMSAT $ANS-341.04
KB5YSQ TO COMMAND SHUTTLE

HR AMSAT NEWS SERVICE BULLETIN 341.04 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 07, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-341.04

NASA has announced that astronaut Charles Precourt will command the final space shuttle/MIR docking mission scheduled for May of 1998. Precourt holds the amateur call KB5YSQ.

The May mission, designated as STS-91, will be aboard the shuttle Discovery. Precourt has visited the Russian space station twice before. NASA also announced that the flight crew will include Wendy Lawrence, KC5KII.

The May mission will retrieve US astronaut Andy Thomas, KD5CHF, from the MIR station. Thomas is scheduled to travel to MIR in January.

[ANS thanks NASA and the ARRL for this information]

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SB SAT @ AMSAT $ANS-341.05
WEEKLY SATELLITE REPORT PT 1

HR AMSAT NEWS SERVICE BULLETIN 341.05 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 07, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-341.05

MIR
Dave Wolf has stated that powering up the radio is "On his List" and it is hoped that Mir will be back on the air soon.

As part of ongoing frequency experiments to improve Amateur Radio operations on board MIR, and to better understand how these frequencies will be effective on the International Space Station, MIR will begin a 2-phase frequency experiment beginning December 1, 1997 and ending on May 31, 1997.

For phase 1, a 70cm/2m crosslink experiment will operate for a 3 month period from December 1, 1997 up to March 1, 1998.

On December 1, 1997 the MIR operating frequencies will change to:

Uplink: 437.850 MHz Downlink: 145.800 MHz

Phase 2 of this experiment will use a 2 meter-only set of uplink and downlink frequencies. This phase of the experiment will begin on March 1, 1998 and will also be of 3 months duration.
[ANS thanks the MIREX team for this information]

SAFEX, MIR 70cm Repeater (Uplink 435.750 MHz FM, Downlink 437.950 MHz FM, subaudible tone 141.3 Hz)
The SAFEX activity very intermittent.
[ANS thanks the MIREX team for this information]

RS-10

(Uplink 145.865-145.905 MHz CW/SSB, Downlink 29.36-29.4 MHz CW/SSB)
Not operational at this time.

RS-12
(Uplink, 145.91-145.95 MHz CW/SSB, Downlink 29.41-29.45 MHz)
Operational, now in mode A.

RS-15
(Uplink 145.858-145.898 MHz CW/SSB, Downlink 29.354-29.394 MHz CW/SSB)
Operational.

RS-16
Transponder information on RS-16.
Uplink = 145.915 - 145.948 MHz
Downlink = 29.415 - 29.448 MHz
Beacons = 29.408 and 29.451 MHz
Pwr 29 MHz Down = 1.2 W /4 W

Beacon 1 = 435.504 MHz
Beacon 2 = 435.548 MHz
Pwr 435 MHz Beacons = 1.6 W

RS-17
Operational. 145.820 MHz
Sputnik RS-17 is still going strong. Its 250 mw beacon has been head around the world. Sputnik has a tentative life expectancy of 3-6 weeks on batteries. There are no solar panels on Sputnik. Since it was launched on November 3, 1997, it is expected to last until the December time frame (your actual mileage will vary). Attitude
Sputnik is now flying ahead and BELOW the Mir Space Station.

QSL Information is as follows:

Sergej Samburov (or) FR5KJ Radio Club
PO Box 73 College Jules Reydellet
Kaliningrad - 10 City 103 Rue de la Republique
Moscow Area 10470 97 489 Saint Denis Cedex
Russia Reunion Island , France
[ANS thanks the MIREX team for this information]

AO-10
(Uplink 435.030-435.18 MHz CW/LSB, Downlink 145.975-145.825 MHz CW/USB)
Operational. Stacey Mills, W4SM, would appreciate any perigee observations of AO-10's beacon or transponder during the next several weeks until conditions begin to improve. If his orientation figures are correct, AO-10 should be down to a solar angle of -84 degs with only 11% illumination. Send reports to w4sm@amsat.org
[ANS thanks Stacey Mills, W4SM, for this report]

AO-27
(Uplink 145.85 MHz FM, Downlink 436.792 MHz FM)
Operational with lots of activity including QRP stations heard over North America. The control ops have programmed AO-27 to start earlier in its pass.
[ANS thanks Michael Wyrick, N4USI, AO-27 Control-op, for this update]

FO-20
(Uplink 145.9-146.0 MHz CW/LSB, Downlink 435.8-435.9 MHz CW/USB)
Operational. FO-20 in mode JA continuously.
[ANS thanks Kazu Sakamoto, JJ1WTK, for this report]

FO-29
Voice/CW Mode JA

(Uplink 145.9-146.0 MHz CW/LSB, Downlink 435.8-435.9 MHz CW/USB)
Digital Mode JD
(Uplink 145.85, 145.87, 145.910 MHz FM, Downlink 435.910 MHz FM 9600
baud BPSK)
Operational. FO-29 was in JA mode on December 5th, 1997.
5 Dec. JA
12 Dec. 08:11z JD 9600
19 Dec. 08:49z Digi-talker
26 Dec. 07:42z JA
9 Jan. 07:14z JD 1200
16 Jan. 07:52z JD 9600
23 Jan. 08:30z JA
30 Jan. 07:24z JD 1200

[ANS thanks Kazu Sakamoto, JJ1WTK, for this report.]
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SB SAT @ AMSAT $ANS-341.06
WEEKLY SATELLITE REPORT PT 2

HR AMSAT NEWS SERVICE BULLETIN 341.06 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 07, 1997
TO ALL RADIO AMATEURS BT
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KO-23
(Uplink 145.85, 145.9 MHz FM, Downlink 435.175 MHz FM,
9600 Baud FSK)
KO-23 downlink efficiency is near zero percent.

Stacey Mills, W4SM, has estimated the keps show that KO-23 will not
experience an eclipses again until December 12th. During the orbits of
that day, eclipses rapidly increase in duration from 2 to 11 minutes.
Eclipse length will then continue to increase, peaking at 35 minutes per
orbit in the December 28th thru January 4th time period. Eclipse length
will then begin slowly decreasing again. KO-23's download efficiency
has dropped dramatically due to the increasing heat and its affects on
the signal deviation.
[ANS thanks Stacey Mills, W4SM, and Jim Weisenberger, AA7KC,
for this report]
KO-25
(Uplink 145.980 MHz FM, Downlink 436.5 MHz FM, 9600 Baud FSK.)
KO-25 operating normally.
[ANS thanks Jim Weisenberger, AA7KC, for this report]

OSCAR-11
(Downlink 145.825 MHz. FM, 1200 Baud PSK. Beacon 2401.500 MHz)
Operating normally. During the period of October 14th through November
16th this satellite has continued to provide good signals on its 145.826
MHz beacon.

The operating schedule is unchanged.
ASCII status (210 seconds)
ASCII bulletin (60 seconds)
BINARY SEU (30 seconds)
ASCII TLM (90 seconds)
ASCII WOD (120 seconds)
ASCII bulletin (60 seconds)
BINARY ENG (30 seconds)

There are also additional status blocks after each bulletin is
transmitted, and between ASCII TLM and WOD.

The mode-S beacon is ON, transmitting an unmodulated carrier, but

telemetry indicates that it has partially failed, and delivering half power. This beacon is a useful test source for those testing mode-S converters, prior to the launch of P3-D. It is considerably weaker than DOVE, which should be used for initial testing. Any reports of reception on 2401.00 MHz would be most welcome. Please e-mail reception reports to g3cwv@amsat.org.

The 435.025 MHz beacon is normally OFF. However it can sometimes be heard when the satellite is being commanded by ground control, (i.e. within range of Guildford, UK). When the 435 beacon is transmitting, the 145 beacon is normally OFF. The data transmitted is mainly binary.

OSCAR-11 users are welcome to visit the G3CWV web site. It contains some software for capturing data, and decoding ASCII telemetry and the WOD survey. There is an archive of raw data (mainly WOD) for analysis, which is continually being expanded, as new data is captured.
The URL is - http://www.users.zetnet.co.uk/clivew/
[ANS thanks Clive Wallis, G3CWV, for this information]

AMSAT-OSCAR-16 (PACSAT)
(Uplink 145.9, 145.92, 145.94, 145.86 MHz FM, 1200 bps Manchester FSK
Downlink 437.0513 MHz SSB, 1200 bps RC-BPSK 1200 Baud PSK.
Beacon 2401.1428 MHz.)
Operating normally.
Uptime is 1175/05:55:02. Time is Sat Dec 06 11:22:49 1997
Bat 1 Temp 9.680 D
Bat 2 Temp 4.839 D Baseplt Temp 5.444 D
RC PSK BP Temp 1.209 D RC PSK HPA Tmp 1.814 D
+Y Array Temp 1.814 D PSK TX HPA Tmp 0.603 D
+Z Array Temp 6.654 D
RC PSK TX Out 0.599 W

Total Array C= 0.435 Bat Ch Cur=-0.046 Ifb= 0.024 I+10V= 0.358
TX:010C BCR:84 PWRC:59F BT: A WC:25 EDAC:23

Information about telemetry values and WOD files can be found at
http://www.arrakis.es/~ea1bcu/wod.htm
[ANS thanks Miguel A. Menendez, EA1BCU, for this report]

DO-17(DOVE)
(Downlink 145.825 MHz FM, 1200 Baud AFSK. Beacon 2401.220 MHz)
DOVE transmits on 145.825 MHz and 2401.220 MHz. It is presently sending 1200 baud AX.25 (standard packet) ASCII telemetry about every minute on two meters. On S band it transmits PSK flags continuously and also the same data as is sent on 2 meters.
[ANS thanks Jim White, WD0E, for this update]

WEBERSAT (WO-18)
(Downlink 437.104 MHz SSB, 1200 Baud PSK AX.25)
No report available at this time.

LUSAT-OSCAR-19
(Uplink 1200 bps Manchester FSK Uplinks: 145.84, 145.86, 145.88,
145.90 MHz FM, Downlink 437.125 MHz SSB, 1200 bps RC-BPSK.)
Operating normally.
uptime is 899/20:55:24. Time is Sat Dec 06 11:00:34 1997
Bat 1 Temp 2.374 D
Bat 2 Temp 6.301 D Baseplt Temp 1.813 D
RC PSK BP Temp -1.552 D RC PSK HPA Tmp -0.991 D
+Y Array Temp 0.131 D PSK TX HPA Tmp -2.113 D
+Z Array Temp -7.722 D
RC PSK TX Out 0.847 W

Total Array C= 0.379 Bat Ch Cur= 0.058 Ifb=-0.006 I+10V= 0.233
TX:019 BCR:80 PWRC:36E BT:3C WC: 0

General information and telemetry samples can be found at:
http://www.arrakis.es/~ea1bcu/lo19.htm
[ANS thanks Miguel A. Menendez, EA1BCU, for this report]

UO-22
(Uplink: 145.900 or 145.975 MHz FM. Downlink 435.120 MHz FM
9600 Baud FSK)
UO-22 is operating normally.
Chris Jackson, G7UPN/ZL2TPO, has reloaded the Store and Forward
communications task on the UO-22 On-Board Computer. This task includes
incremental checksums which should make uploading slightly faster.
In the old task, once an upload was complete, the spacecraft had to
perform the checksum on the complete file. Depending on the file
length, this could take quite a long time. With the new task, the
checksum is computed on the fly - while the data is actually being
uploaded. Thus there is no need to recompile at the end of the
transfer and this checksum delay is then removed.
However, all files that were started before Chris loaded the task
will receive a corrupt body checksum error when the upload is completed.
If anyone gets persistent body checksum errors while uploading files to
UO-22 would they please let Chris Jackson know as soon as possible
[ANS thanks Chris Jackson, G7UPN/ZL2TPO, Ground station and
Operations Manager of UO-22, for this report]

IO-26 (ITAMSAT)
Uplink 145.875, 145.900, 145.925, 145.950 MHz FM, Downlink 435.822 MHz
SSB, 1200 Baud PSK)
IY2SAT-1>AMSAT <UI>:
 12th November 1997
All sub-systems are OK.
Loading in progress.
Please don't tx on uplink. Stay tuned for further news!
Best wishes from the ITAMSAT team.
[ANS thanks Daniele, IK2XRO, and Piercarlo, IW2EGC,
ITMSAT Command Station for this report]

[Please send your Satellite or News reports to ANS Editor BJ Arts,
WT0N, via e-mail, at bjarts@the-bridge.net or to wt0n@amsat.org]

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